AMENDMENTS TO THE CLAIMS

Claim 1. (Currently Amended) A plastic or polymer composite article formed from an [[An]] immiscible polymer blend comprising 60% or greater of a high density polyethylene (HDPE) matrix phase and 40% or less of a polycarbonate (PC) phase ~~or 60% or greater HDPE and 40% or less of a mixture of acrylonitrile-butadiene-styrene (ABS) and PC~~ , wherein:

said PC phase of said immiscible polymer blend consists essentially of fiber-shaped nano-domains having a length-wise dimension aligned essentially parallel in said HDPE matrix phase; ~~wherein~~

said HDPE has a melt flow at 190°C/2.16 Kg of less than 1g/10 min, ~~and said PC or said mixture of PC and ABS has a melt flow of an injection molding grade PC or an injection molding grade PC and ABS mixture, respectively, and wherein~~

the ratio of HDPE to PC ~~or HDPE to the mixture of ABS and PC~~ provides a blend having a modulus greater than the additive contribution of each polymer to overall stiffness and ~~wherein~~

the amount of HDPE and the amount of PC ~~or the amount of the mixture of ABS and PC~~ when added together equal 100%.

Claims 2 – 11. (Canceled)

Claim 12. (Currently Amended) The ~~plastic~~ composite article of claim 1, [[11]] which is formed into the shape of lumber.

Claim 13. (Currently Amended) The ~~plastic~~ composite article of claim 1, [[11]] which is a railroad tie.

Claim 14. (Currently Amended) The ~~plastic~~ composite article of claim 1, [[11]] which is a marine piling.

Claim 15. (Currently Amended) A method of making a plastic or polymer composite article, comprising:

(a) preparing an immiscible polymer blend comprising 60% or greater high density polyethylene (HDPE) and 40% or less polycarbonate (PC) ~~or 60% or greater HDPE and 40% or less of a mixture of acrylonitrile-butadiene-styrene (ABS), and PC~~ , wherein said HDPE has a melt flow at 190°C/2.16 Kg of less than 1g/10 min, and said PC ~~or mixture of PC and ABS~~ of an injection molding grade PC ~~or an injection molding grade PC and ABS mixture, respectively~~ , and wherein the ratio of HDPE to PC ~~or HDPE to the mixture of ABS and PC~~ provides a blend having a modulus greater than the additive contribution of each polymer to overall stiffness and wherein the amount of HDPE and the amount of PC ~~or the amount of the mixture of ABS and PC~~ when added together equal 100%; and

(b) shaping the blend into a desired shape of the article;

wherein said shaping step comprises a step of extruding said polymer blend.

Claim 16. (Currently Amended) The method of claim 15 wherein at least one of said preparing and shaping steps comprise a step of continuous extrusion of said polymer blend .

Claim 17. (Currently Amended) The method of claim 15 wherein said preparing step comprises ~~extrusion~~ a step of extruding said polymer blend .

Claim 18. (Currently Amended) The method of claim 15 wherein said shaping step further comprises the step of molding said extruded polymer blend .

Claim 19. (Currently Amended) The method of claim 15 wherein said molding step ~~preparing and shaping~~ comprises injection molding.

Claim 20. (Currently Amended) The polymer blend of claim [[3]] 1 , wherein at least one of said HDPE or PC is recycled.

Claim 21. (Canceled)

Claim 22. (Currently Amended) The method of claim 15, wherein at least one of said HDPE or PC ~~in a blend comprising HDPE and PC or at least one of HDPE, ABS, or PC in a blend comprising HDPE and a mixture of ABS and PC~~ is recycled.

Claim 23. (Canceled)

Claim 24. (Currently Amended) A plastic or polymer composite article formed from an [[An]] immiscible polymer blend consisting essentially of a high density polyethylene (HDPE) matrix phase and a polycarbonate (PC) phase distributed in said matrix phase , ~~or HDPE and a mixture of acrylonitrile-butadiene-styrene (ABS) and PC,~~ wherein:

said PC phase of said immiscible polymer blend consists essentially of fiber-shaped nano-domains having a length-wise dimension aligned essentially parallel in said HDPE matrix phase; ~~wherein~~

said HDPE has a melt flow at 190°C/2.16 Kg of less than 1g/10 min,

said PC ~~or said mixture of PC and ABS~~ has the melt flow of injection molding grade PC ~~or injection molding grade PC and ABS mixtures, respectively~~ , and

the ratio of HDPE to PC ~~or HDPE to the mixture of ABS and PC~~ provides a blend having a modulus greater than the additive contribution of each polymer to overall stiffness.

Claim 25. (New) The composite article of claim 1 wherein said PC has a melt flow greater than 1.